

A New Millennium for Galaxy Morphology Conference

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ABSTRACT

"Galaxy Evolution: IR and Sub-mm Perspectives"

by

Carol J. Lonsdale

The California Institute of Technology and

The Jet Propulsion Laboratory

Pasadena, CA

I will present results from the ISO-IRAS Faint Galaxy Survey (IIFGS), a program designed to obtain ISO observations of the most distant and luminous galaxies in the IRAS Faint Source Survey by filling short gaps in the ISO observing schedule with pairs of 12 micron ISOCAM and 90 micron ISOPHOT observations. Over 500 sources have been observed by ISOCAM, with a detection rate over 80%, covering over 1.25 square degrees of sky to an 12 micron point source completeness limit of approximately 1.0 mJy (corresponding to a 10 sigma detection sensitivity). Observations are presented for 200 sources detected in the first phase of the survey, for many of which we have ground-based G and I band images and optical spectroscopy. The ground-based data confirms that the IIFGS strategy efficiently detects moderate-redshift ( $z \sim 0.1-0.5$ ) strong emission line galaxies with  $L_{60} > 10^{11}$  solar luminosities. The infrared-optical spectral energy distributions are comparable to those of nearby luminous infrared galaxies. The IIFGS sample is one of the largest and deepest samples of infrared-luminous galaxies available, a rich sample for studying Luminous Infrared Galaxies up to redshifts of about 1 and for understanding the evolution of infrared galaxies and the star-formation rate in the Universe.